

WHAT IS CLAIMED IS:

1. A method of designing a semiconductor device, said semiconductor device to be designed comprising:

5 a semiconductor substrate;

an element isolation insulating film provided in a part of a main surface of said semiconductor substrate;

a gate structure provided on a part of said main surface of said semiconductor substrate, said gate structure being placed in an element forming region defined by said element isolation insulating film; and

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source/drain regions provided in said main surface of said semiconductor substrate in said element forming region, said source/drain regions forming a pair holding a channel forming region defined under said gate structure therebetween, wherein

stress exerted on an area of said semiconductor substrate is controlled depending on a shape of said element forming region, said area of said semiconductor substrate holding said gate structure thereover.

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2. The method according to claim 1, wherein

said element forming region includes in top view at least one projecting portion provided along a perimeter of said element forming region.

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3. The method according to claim 1, wherein

said element forming region includes in top view at least one recessed portion provided along a perimeter of said element forming region.

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4. The method according to claim 1, wherein

in top view, a corner of said element forming region is greater in curvature than a corner of an element forming region defined by an element isolation insulating film which is formed by a patterning process using a photomask having a rectangular opening
5 pattern.